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Health Alert - Upcoming Gypsy Moth Spraying

Washington State Department of Agriculture is planning to undertake aerial pesticide spraying in portions of Ballard and Magnolia in Seattle in late April and May to combat a potential Gypsy Moth infestation. In response to this plan, members of our community have raised concerns regarding potential health effects related to the pesticide, Foray 48B, which contains the bacteria *Bacillus thuringiensis kurstaki*, or Btk.

Bacillus thuringiensis species are naturally-occurring soil bacteria that produce toxins selective for various species of insects. In the case of Btk, the δ-endotoxin is toxic to Gypsy Moth larvae. Published data on acute toxicity to humans exposed through the oral and respiratory routes suggest that toxicity of Btk to humans and animals is extremely low to negligible (see EXTOXNET, a pesticide information project at http://ace.orst.edu/cgi-bin/mfs/01/pips/bacillus.htm). Only one case of infection due to Btk has been published in the medical literature, that of a farmer who splashed the pesticide in his eye and developed a corneal ulcer.

More than 100 million pounds of Btk are used each year to control agricultural pests in the United States, including use by commercial landscapers, organic farmers and gardeners. There have been four surveillance studies that have looked for health problems in persons living in areas where aerial spraying of Btk occurred; none was able to link Btk to human illness. The most comprehensive study of Foray 48B was done by the Capital Health Region in Vancouver, British Columbia, and is available at www.caphealth.org (click on "Medical Health Officer"). The Vancouver study of persons in the spray area included a case-control study of 29 asthmatic children, a health survey of adults, monitoring of physician and emergency department visits, laboratory-based surveillance, and environmental exposure measurements before and after the spraying. Interestingly, the investigators documented the Foray 48B strain of Btk on fruits and vegetables in local supermarkets as well as in the nares of children within the spray zone *before* the spraying began.

There was no change in any of the health indicators monitored including peak expiratory flow rates in asthmatic children. One child did have an exacerbation of asthma during the study period. **Persons calling in to a phone line to take health complaints reported headache, shortness of breath, redness, itching, burning of the eyes, stuffy or runny nose, sore throat, upset stomach or nausea, and a metallic taste.** In addition, no differences were found in symptoms from 522 persons living inside compared to 487 persons living outside the spray zone or before compared to after the spraying.

Laboratory-based surveillance for infections due to the pesticide strain of Btk after spraying in Oregon and Vancouver did not implicate Btk in any human illness. Isolates that were recovered were considered contaminants in most cases, although in 3 cases from the Oregon study in which it appears the organism was a contaminant the data were not conclusive.

In addition to Btk, the pesticide Foray 48B contains "inert" ingredients that are proprietary and cannot be revealed to the public. The U.S. EPA as well as Washington State Department of Health toxicologists have reviewed the list of inert ingredients and have concluded that the pesticide product, including the inert ingredients, has little to no toxicity.

Despite the lack of evidence for serious adverse health effects related to Foray 48B, we cannot conclude that there is no risk for any health effects. The potential does exist for unanticipated, less serious or infrequent health effects, particularly in persons who may be sensitive to the pesticide formulation. In particular, some persons sensitive to inhaled allergens or irritants may experience allergic symptoms, respiratory irritation or rash. Even though it has not been shown that such symptoms are related to Btk spraying, Public Health is recommending all persons in the spray area minimize exposure to the pesticide at the time of the application by remaining indoors for 30 minutes after the application.

In particular, persons who have underlying illnesses that make them more susceptible to infections and respiratory irritation such as leukemia, AIDS, other immune deficiencies, or who are receiving radiation or chemotherapy treatment or who have asthma, emphysema or allergic sensitivities should review the precautions below.

- Remain indoors for at least 30 minutes following the spray application.
- Children should wait until moisture from the spray and dew has dried on grass and shrubs before they play outside and wash hands after playing outside.
- If you come in contact with the wet spray, wash the affected skin with soap and water. If wet material should get into the eyes, flush them with water for 15 minutes.

We are asking physicians to report any adverse health effects thought to be related to exposure to pesticide during the upcoming spray periods. Physicians and the public can report health effects that may be related to the spraying and request to be notified of the exact dates and times of the spray application by calling the WA Department of Agriculture Gypsy Moth Hotline, (1-800-443-6684). In addition, the manufacturer sponsors a 24-hour technical support line (1-800-323-9597) for physicians managing possible adverse reactions to Foray 48B through which specific ingredients may be released if medically necessary.

Additional information is available on our Public Health Internet web site at www.metrokc.gov/health that can help community members learn more about Btk and make informed decisions regarding whether special precautions are needed for certain individuals. Also see the EPS website and search for *Bacillus thuringiensis* at www.epa.gov.

Travel Alert – Measles Prevention, Japan

A nine-month-old King County child had measles in February 2000 after travel to Japan. Subsequently, one of the child's parents developed a secondary case of measles. Although measles is commonly thought of as a

risk for travelers to developing countries, Public Health subsequently discovered that certain regions in Japan (including the prefecture visited by the case) are experiencing high levels of measles disease. Since much of the international travel to and from Japan involves connections through Tokyo, any destination in Japan could put the traveler at increased risk for exposure to measles.

Infants ≤ 6 months of age should be adequately protected from measles by maternally derived antibodies, *if the mother had measles disease or had been vaccinated against measles*. If the mother is not immune to measles, the infant may be given IG before departure to areas where measles is endemic. Children 6-11 months of age should receive a dose of single-antigen measles vaccine (or MMR, if monovalent is unavailable) prior to departure. Please note that this "first dose" of MMR will need to be re-administered on or after the first birthday for optimal long-term immune protection and to count as a valid first dose of the primary series. Children 12-14 months of age should also receive MMR vaccine before departure.

The infected parent had a documented history of receiving measles vaccine in 1964 (possibly heat-killed vaccine, no longer used) but had not been re-vaccinated since that time. **This emphasizes the need for non-immune adults, including travelers, to have at least one documented dose of the currently available measles vaccine** (Moraten or Edmonston-Enders strain, licensed in 1968).

A single dose of the current measles vaccine administered on or after the first birthday provides immunity to at least 95% of recipients. A second dose confers immunity in the remaining 5% of "non-responders". Killed measles virus and earlier live virus vaccines used prior to 1968 in the U.S. should not be relied on to provide long-lasting protection. All adults born in or before 1957 and without documentation of measles disease should be considered for vaccination with MMR (especially those attending college, institutional and health care settings); international travelers as well as others at high risk should consider a second dose of MMR.

Asymptomatic HIV Reporting: The First Half-Year

After several years of debate, reporting of asymptomatic HIV infections in Washington State was implemented on September 1, 1999. The new HIV reporting rules require that persons with HIV diagnosed at any time in the past be reported, but only after they have visited their health care provider after 9/1/99. HIV and AIDS cases are reported by patient name, but

asymptomatic HIV case names are converted to a non-name code by health department staff within 3 months after a complete report is received. In the first 6 months of reporting, Public Health-Seattle & King County (PH-SKC) Epidemiology staff received 290 completed asymptomatic HIV case reports. Thirty of these were persons diagnosed with HIV since 9/1/99 and 260 were HIV cases diagnosed before 9/99.

Nearly 4,000 King County residents currently living with AIDS or symptomatic HIV have been reported to PH-SKC. It is estimated that there are an additional 2,500 asymptomatic persons who have been diagnosed with HIV and therefore should eventually be reported at their next visit to their health care provider. Roughly another 1,500-2,000 residents are thought to have HIV infection but have not yet been tested and reported. An estimated 400 new HIV infections occur annually in the county. These HIV estimates are based on a variety of indirect or inferential methods. Once reporting of previously-diagnosed HIV cases is largely complete, we will be able to monitor HIV infections much more accurately and generate the more detailed data needed for properly planning HIV prevention and care services.

Because they precede the development of AIDS symptoms, asymptomatic HIV case reports generally reflect more recent trends in HIV transmission compared to reported AIDS cases. Among the 290 King County HIV reports received in the first 6 months of reporting, 13% were female compared to 6% of AIDS cases since 1993. Similarly, in the first 6 months of reporting, the Washington Department of Health received 190 HIV case reports on persons residing outside of King County; 28% of these were females compared to 16% of AIDS cases diagnosed since 1993. These data suggest that HIV is an increasing concern in women, especially those residing outside King County.

PH-SKC will begin disseminating data on asymptomatic HIV infections on a regular basis in late 2000 or early 2001. For the time being, most of our efforts will be directed at fully implementing reporting by health care providers and laboratories. We have experienced a high level of cooperation from providers and labs, and we wish to express our thanks to these partners for their critical contribution to this important public health effort. For more information about HIV/AIDS reporting, call Dr. Sharon Hopkins at 206-296-4645 or by e-mail at Sharon.Hopkins@metrokc.gov.

Disease Reporting (area code 206)
AIDS.....296-4645
Communicable Disease.....296-4774
STDs.....731-3954
Tuberculosis.....731-4579
24-hr Report Line 296-4782
Hotlines:
CD Hotline.....296-4949
HIV/STD Hotline..... 205-STDS

http://www.metrokc.gov/health

Reported Cases of Selected Diseases Seattle-King County 2000

	Cases Reported In March		Cases Reported Through March	
	2000	1999	2000	1999
VACCINE-PREVENTABLE DISEASES				
Mumps	0	1	2	1
Measles	0	0	1	0
Pertussis	20	194	49	298
Rubella	0	0	0	2
SEXUALLY TRANSMITTED DISEASES				
Syphilis	9	10	16	22
Gonorrhea	114	96	276	260
Chlamydial infections	468	420	1175	1009
Herpes, genital	73	58	246	173
Pelvic Inflammatory Disease	25	28	71	71
Syphilis, late	5	7	7	12
ENTERIC DISEASES				
Giardiasis	27	13	42	31
Salmonellosis	13	13	47	40
Shigellosis	4	8	93	15
Campylobacteriosis	25	14	64	45
E.coli O157:H7	2	3	2	8
HEPATITIS				
Hepatitis A	12	10	36	26
Hepatitis B	1	4	9	9
Hepatitis C/non-A, non-B	1	0	1	1
AIDS	8	27	31	59
TUBERCULOSIS	9	8	25	30
MENINGITIS/INVASIVE DISEASE				
Haemophilus influenzae (cases < 6 years of age)	0	0	1	0
Meningococcal disease	1	1	4	6